Docket N . 22-0006

DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **GATED POWER TIME DIVISION DOWNLINK FOR A PROCESSING SATELLITE** the specification of which

__X__ is attached hereto

_____ was filed on

_____ as Application Serial No. _____ and was amended on _____.
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
NONE				
(Number)	(Country)	(Day/Mo./Yr. Filed)	Yes	No

Docket No. 22-0006

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

NONE			
(Number)	(Country)	(Day/Mo./Yr. Filed)	(Status)

I hereby appoint as principal attorneys:

Robert W. Keller, Reg. No. 25,347
Michael S. Yatsko, Reg. No. 28,135
Connie M. Thousand, Reg. No. 43,191
William M. Wesley, Reg. No. 26,521

each with full power to prosecute this application, to transact all business in the United States Patent and Trademark Office connected therewith, and to appoint and revoke associate and substitute associate attorneys.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Address all telephone calls to: (310) 812-4910

Address all correspondence to: PATENT COUNSEL
TRW Inc.
Space & Electronics Group
One Space Park, E2/6072
Redondo Beach, California 90278

Dock t No. 22-0006

Full name of sole or first inventor Stuart T. Linsky
Inventor's signature _____ Date: 3/15/99
Residence San Pedro, California
Citizenship United States
Post Office Address 1070 Santa Cruz Street, San Pedro, California 90732

Full name of second inventor David A. Wright
Inventor's signature _____ Date: March 15th, 1999
Residence Solana Beach, California
Citizenship United States
Post Office Address 309 Solana Hills Drive #51, Solana Beach, California 92075

(Rev. 6-93)
OMB No. 0651-0011 (exp. 4/94)

RECORDATION FORM COVER SHEET
PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

Tab settings ⇨ ⇨ ⇨ ▼ ▼ ▼ ▼ ▼ ▼ ▼

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):
Stuart T. Linsky
David A. Wright

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies):
Name: TRW Inc.
Internal Address: Law Dept.
Bldg. E2/6072
Street Address: One Space Park
City: Redondo Beach State: CA ZIP: 90278
Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:
☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other
Execution Date: March 15, 1999

4. Application number(s) or patent number(s):
If this document is being filed together with a new application, the execution date of the application is: March 16, 1999
A. Patent Application No.(s)
B. Patent No.(s)
Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:
Name: TRW Inc.
Internal Address: Law Dept.
Bldg. E2/6072
Street Address: One Space Park
City: Redondo Beach State: CA ZIP: 90278

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41) $ 40
☐ Enclosed
☒ Authorized to be charged to deposit account

8. Deposit account number:
20-1515
(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Michael S. Yatsko — Name of Person Signing
Michael S. Yatsko — Signature
3/16/99 — Date

Total number of pages including cover sheet, attachments, and document: 4

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

BEST AVAILABLE COPY

Dock t No. 22-0006

ASSIGNMENT

For valuable consideration, the adequacy and receipt of which are hereby acknowledged, we Stuart T. Linsky and David A. Wright respectively, of San Pedro, California and Solana Beach, California do hereby sell and assign to TRW Inc., One Space Park, Redondo Beach, California, an Ohio corporation, its successors and assigns, the entire right, title and interest in and to the improvements in **GATED POWER TIME DIVISION DOWNLINK FOR A PROCESSING SATELLITE** which has been invented by us, as described in the application for United States Patent which we executed respectively, on 3/15/99, and 3/15/99, and any and all applications for patent and patents therefore in any and all countries, including all divisions, reissues, continuations, and extensions thereof, and the right to claim the priority date of the first filed application in the United States, and authorize and request any official whose duty it is to issue patents, to issue any patent on said improvements or resulting therefrom to said TRW Inc., or its successors or assigns, and agree that on request and without further consideration, but at the expense of TRW Inc., we will communicate to TRW Inc. or its representatives or nominees any facts known to us respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths, and generally do everything possible to aid TRW Inc., its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

3/15, 1999

Inventor: _____
Stuart T. Linsky

March 15, 1999

Inventor: _____
David A. Wright

Dock t N . 22-0006

STATE OF CALIFORNIA)
)ss
COUNTY OF LOS ANGELES)

On March 15, 1999 before me, Kathleen R. Tait, Notary Public personally appeared Stuart T. Linsky ____ personally known to me -or- __X__ proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me the he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

KATHLEEN R. TAIT
Commission # 1133065
Notary Public — California
Los Angeles County
My Comm. Expires Apr 6, 2001

WITNESS my hand and official seal.

Kathleen R. Tait
Notary Public

(SEAL)

STATE OF CALIFORNIA)
)ss
COUNTY OF LOS ANGELES)

On March 15, 1999 before me, Kathleen R, Tait, Notary Public personally appeared David A. Wright ____ personally known to me -or- __X__ proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me the he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

KATHLEEN R. TAIT
Commission # 1133065
Notary Public — California
Los Angeles County
My Comm. Expires Apr 6, 2001

WITNESS my hand and official seal.

Kathleen R. Tait
Notary Public

(SEAL)

Form PTO-1595
(Rev. 03/01)
OMB No. 0651-0027 (exp. 5/31/2002)

RECORDATION FORM COVER SHEET

PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office

Tab settings ⇨⇨⇨ ↓ ↓ ↓ ↓ ↓ ↓ ↓

To the honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):
TRW, Inc. n/k/a Northrop Grumman Space and Mission Systems Corporation, an Ohio Corporation

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies)
Name: Northrop Grumman Corporation
Internal Address: _____

Street Address: 1840 Century Park East

City: Los Angeles State: CA Zip: 90067-2199
Country: USA
Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:
☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other: _____

Execution Date: January 22, 2003

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)
See attached Sheets – Patent Applications

B. Patent No.(s)
See attached Sheets - Patents

Additional numbers attached? ☒ Yes ☐ No

5. Name and address of party to whom correspondence concerning document should be mailed:
Name: Terry J. Anderson

Internal Address: _____

Northrop Grumman Corporation

Street Address: 1840 Century Park East, M/S 30/110/31

City: Los Angeles State: CA Zip: 90067-2199

6. Total number of applications and patents involved: 1483

7. Total fee (37 CFR 3.41).....$ 59,320.00

☐ Enclosed

☒ Authorization to charge to the deposit account

8. Deposit account number:
14-1325

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy Is a true copy of the original document.

Name of Person Signing:
Terry J. Anderson

Signature: Terry J. Anderson Date: Feb 12, 2003

Total number of pages including cover sheet, attachments, and documents: 118

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

ASSIGNMENT OF

PATENTS AND PATENT APPLICATIONS

WHEREAS, TRW Inc., now known as Northrop Grumman Space and Mission Systems Corp., a corporation created and existing under the laws of the State of Ohio ("Assignor"), is either the sole and exclusive owner or has an ownership interest in all of the right, title and interest in the patents (including any and all continuations-in-part, continuations, provisionals, statutory invention registrations, divisions, substitutes, reissues, reexaminations, or extensions thereof) relating to Assignor's businesses, including without limitation, the United States Patents specified in Exhibit A, the foreign patents/applications specified in Exhibit B and the inventions disclosed therein and covered thereby (collectively referred to as the "Patent Property");

WHEREAS, Northrop Grumman Corporation, a Delaware corporation ("Assignee"), is desirous of acquiring all of the right, title and interest of TRW Inc. in and under the Patent Property;

WHEREAS, on December 11, 2002, Richmond Acquisition Corp. ("Richmond"), a wholly-owned subsidiary of Assignee, was merged with and into Assignor (the "Northrop/TRW Merger") pursuant to that certain Agreement and Plan of Merger, dated June 30, 2002 (the "Northrop/TRW Merger Agreement");

WHEREAS, pursuant to the Northrop/TRW Merger Agreement, Assignor, as the surviving corporation, became a wholly-owned subsidiary of Assignee;

WHEREAS, on December 18, 2002, Assignor filed a Certificate of Amendment pursuant to which it changed its name from TRW Inc. to Northrop Grumman Space and Mission Systems Corp.; and

WHEREAS, consistent with the Northrop/TRW Merger, Assignor desires to assign to Assignee all of Assignor's right, title, and interest in and to the Patent Property.

NOW, THEREFORE, in consideration of the foregoing premises, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and the covenants and agreements in this Assignment, the Assignor and Assignee hereby agree as follows:

1. Grant. Assignor does hereby sell, transfer, convey, assign and deliver to Assignee all of the Assignor's right, title, and interest in and to the Patent Property, all other applications for letters patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, treaties, including all future conventions, unions, agreements, acts, and treaties, the same to be held and enjoyed by Assignee for Assignee's own use and enjoyment, and for the use and enjoyment of Assignee's successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor if this Assignment and sale had not been made; together with all claims for damages by reason of past infringements of the Patent Property, along with the right to sue for injunctive relief and collect damages for the use and benefit of Assignee and

Assignee's successors, assigns and other legal representatives, in the United States, its territorial possessions and all foreign countries, to the end of the term or terms for which letters patent are or may be granted or reissued as fully and entirely to the same extent as the same would have been held and enjoyed by Assignor.

2. Further Assurances. Each party will, without additional consideration, take such further actions and execute promptly such further documents as are necessary to effect and record the above assignment, including any actions or documents required by the applicable registrar to document the transfer herein or as may be necessary to protect, secure and vest good, valid and marketable title to the Patent Property and related rights in Assignee.

3. Recording of Assignment. Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any officer of any country or countries foreign to the United States, whose duty it is to issue Patent Property or other evidence or forms of intellectual property protection or applications as, to issue the same to Assignee and Assignee's successors, assigns and other legal representatives in accordance with the terms of this instrument.

IN TESTIMONY WHEREOF, Northrop Grumman Space and Mission Systems Corp. has caused these presents to be signed by its duly authorized representative, this 22nd day of January, 2003.

ASSIGNOR:

NORTHROP GRUMMAN SPACE AND MISSION SYSTEMS CORP. (FORMERLY KNOWN AS TRW INC.)

By: Kathleen M. Salmas
Kathleen M. Salmas
Secretary

State of California
County of Los Angeles

On 1-22-03 before me, Beverly L. Huff, Notary Public

personally appeared Kathleen M. Salmas, personally known to me - ~~OR~~ - proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

BEVERLY L. HUFF
Commission # 1381656
Notary Public - California
Los Angeles County
My Comm. Expires Oct 26, 2006

WITNESS my hand and official seal,

Beverly L. Huff
Signature of Notary Public

IN TESTIMONY WHEREOF, Northrop Grumman Corporation has caused these presents to be signed by its duly authorized representative, this ___ day of _____, 2003.

ASSIGNEE:

NORTHROP GRUMMAN CORPORATION

By: _____

John H. Mullan
Corporate Vice President and Secretary

State of California
County of Los Angeles

On 1-22-03 before me, Beverly L. Huff, Notary Public

personally appeared John H. Mullan, personally known to me - ~~OR~~ - proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

BEVERLY L. HUFF
Commission # 1381656
Notary Public - California
Los Angeles County
My Comm. Expires Oct 26, 2006

WITNESS my hand and official seal,

Beverly L. Huff

Signature of Notary Public

EXHIBIT A
U.S. PATENT APPLICATIONS

05/860421
06/333534
06/376435
06/376432
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09/351958
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EXHIBIT A
U.S. PATENT APPLICATIONS

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09/624149
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09/627758
09/628196
09/633954
09/637342
08/760625
09/641654
09/644588
09/651752
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09/738520
09/742917
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EXHIBIT A
U.S. PATENT APPLICATIONS

09/948035
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09/962629
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EXHIBIT A
U.S. PATENT APPLICATIONS

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60093219_1.DOC

EXHIBIT A
U.S. PATENTS

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